

Materials Science and Engineering A201 (1995) v-vi

Contents

History effects in metals during constant and variable amplitude testing. I. Wavy dislocation glide behaviour HJ. Christ, G. Hoffmann and O. Öttinger (Erlangen, Germany)	
Microstructural changes during creep of an SiC/Al ₂ O ₃ composite	13
The enhanced work hardening rates of the constituent TiAl and Ti ₃ Al phases in a lamellar microstructure M.F. Bartholomeusz, M.A. Cantrell and J.A. Wert (Charlottesville, VA, USA)	24
Cyclic behaviour of a 316L stainless steel hardened by an explosive treatment	32
Impression test of 63Sn-37Pb eutectic alloy	40
Computer simulation of impression creep using the hyperbolic sine stress law	50
Patterns of serrated flow in a low-carbon steel	58
Cyclic stress-strain response and strain localization of polycrystalline Cu tested under stress-control and different start-up	
B. Weiss, S. Kong, R. Stickler (Vienna, Austria), L. Kunz and P. Lukas (Brno, Czech Republic)	65
Mechanical behaviour and failure mechanisms of a binary Mg-6%Zn alloy reinforced with SiC particulates A. Martín and J. LLorca (Madrid, Spain)	77
Mechanical properties and microstructure of cast oxide-dispersion-strengthened aluminum	88
Two-dimensional sections of the yield locus of a Ti-6%Al-4%V alloy with a strong transverse-type crystallographic	
 α-texture J.A. Medina Perilla and J. Gil Sevillano (San Sebastían, Spain) 	103
Effect of Cu concentration on the high-temperature creep behavior of Al-Cu solid solution alloys	111
High-temperature deformation in a superplastic 7475 Al alloy with a relatively large grain size	118
Effect of cyclic loading superposition in the primary creep stage on the strain and fracture behaviour of 16Cr-10W-4Mo-	
TiAl nickel-base alloy	127
Use of finite element modeling to interpret diffraction peak broadening from elastic strain distributions	134
The effect of small stresses on the kinetics of the bainite transformation	143
Effect of shock pressure and plastic strain on chemical reactions in Nb-Si and Mo-Si systems	150
Interfacial properties of SiC monofilament reinforced β'-SiAlON composites	159
Microstructure and phase morphology during thermochemical processing of α_2 -based titanium aluminide castings M. Saqib, L.S. Apgar, D. Eylon and I. Weiss (Dayton, OH, USA)	169

vi	
Optimizing the properties of TiAl sheet material for application in heat protection shields or propulsion systems C. Koeppe, A. Bartels (Hamburg, Germany), H. Clemens, P. Schretter and W. Glatz (Tirol, Austria)	182
Computer simulation of martensitic transformation in Fe-Ni face-centered cubic alloys	194
An evaluation of steady state creep mechanism in an Al-Mg/26 Al ₂ O _{3f} composite	205
Stresses in NiO, Cr ₂ O ₃ and Al ₂ O ₃ oxide scales	211
An evaluation of the properties of Cr ₃ Si alloyed with Mo	229
Strains generated at austenitic:ferritic dissimilar welds during elastic pressure changes at high temperature J.A. Williams (Loughborough, UK) and J.D. Parker (Swansea, UK)	242
A calorimetric and metallographic study of precipitation process in AA6061 and its composites Y. Song and T.N. Baker (Glasgow, UK)	251
Effects of in-situ alloying and microalloying on the microstructure and recrystallization behavior of spray-deposited SAE 1008 steel sheet	261
Thermal residual stresses in a Functionally Graded Material System	269
Surface characterization of SiC composites exposed to deuterium ions, using atomic force microscopy N. Almqvist (Luleå, Sweden), M. Rubel (Stockholm, Sweden) and E. Franconi (Rome, Italy)	277
LETTERS	
Thermal stability of nanostructured materials Ti, $Ti_x N$, Mo and $Mo_2 N$	L1
Laser surface alloying of Incoloy 800H with silicon carbide: microstructural aspects	L5
Mechanical behaviour of two-phase materials investigated by the finite element method: necessity of three-dimensional modeling	L8
ERRATUM	287
AUTHOR INDEX	289
SUBJECT INDEX	291

